DOCUMENT RESUME

ED 306 936 IR 013 646

AUTHOR Albright, Michael J.
TITLE A Case for Integrated Instructional Technology Services (IITS) in Higher Education.
PUB DATE 18 Jan 88
NOTE 32p.; Paper presented at the Annual Conference of the Association for Educational Communications and Technology (New Orleans, LA, January 18, 1988).
PUB TYPE Viewpoints (120) -- Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Libraries; *Classroom Environment; Educational Change; *Educational Resources; *Educational Technology; *Faculty Development; Higher Education; History; Information Services; *Models; Research and Development; Teaching Skills

ABSTRACT

This paper, which presents a model for Integrated Instructional Technology Services (IITS) that is somewhat different from the existing published models for instructional technology services at the postsecondary level, begins by providing background information on the development and implementation of instructional technology services at the postsecondary level from the early 1900s to more recent times; the systems approach to teaching; the process of college teaching; faculty development programs; and classifications of instructional development services that need to be provided for institutions at the course, faculty, media development, and media utilization levels. Seven logical functional areas used to form the IITS model are then described in terms of how they can be viewed within the framework of an IITS concept: (1) learning resources; (2) classroom technologies; (3) media development; (4) instructional/faculty development; (5) instructional telecommunications; (6) instructional computing; and (7) research evaluation. Eight suggestions for implementing the model on a college or university campus conclude the paper. (8 references) (CGD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED306936

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

A Case for Integrated Instructional Technology Services (IITS) in Higher Education

Michael J. Albright
Coordinator for Instructional Development
Media Resources Center
Iowa State University
Ames, Iowa 50011

Presented at the annual conference of the
Association for Educational Communications
and Technology (AECT)
New Orleans, Louisiana
January 18, 1988

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Michael Albright

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

IR013646

BEST COPY AVAILABLE

Over the past few years, I have become quite concerned about the future of instructional technology services in colleges and universities in this country. In 1982-83, I chaired a task force for AECT's Division of Educational Media Management (DEMM) that studied conditions in media centers in 196 postsecondary institutions nationwide (Albright, 1984). The results were quite disturbing. For example, we found that only 28 percent of the responding media centers in public colleges and universities were able to maintain budgets that kept up with inflation between 1977-78 and 1982-83, and more than 40 percent suffered net losses in staff positions during this period. Just between 1981-82 and 1982-83, 43 percent of the centers at public institutions had no budgetary growth whatsoever, and one-fourth of them lost staff positions. These statistics might have been even more alarming if data from non-responding institutions could have been included.

That study is now five years old, and there is little evidence that matters are improving. Just during the past year, one of the most prominent university media centers in the country has been almost completely dismantled and now has just a fragment of its former capability. Most of us can relate horror stories like that, and some can tell several. The titles of journal articles and conference presentations in the instructional technology field often address themes such as survival, or managing programs in an environment of decline or administratively-imposed reorganization, or how to buy a boxcar full of equipment with no budget. Many of us find it a constant struggle simply to maintain day-to-day operations, to say nothing of growth. Given the realization that

instructional technology has never in its history ever had so much to offer our institutions, we have to ask ourselves how we could possibly have let things like this happen.

Obviously, the general economic climate on our campuses and in our states has a powerful influence on the size of our budgets, and we are frequently at the mercy of the biases of senior-level administrators. However, I suggest that we have brought many of our problems upon ourselves through a narrow interpretation, or in some cases even a lack of understanding, of what instructional technology is and how it should be used to strengthen college teaching.

My purpose in this paper is to present a model for Integrated Instructional Technology Services (IITS), a somewhat different conceptualization of how these services ought to be provided at the postsecondary level. I will conclude with suggestions for implementing the model on a college or university campus.

Let me begin with a short overview of where we have been with instructional technology services at the postsecondary level. These services date back to the very early 1900's, when "visual education" was taken as a responsibility by some university Extension divisions. Organized centers to maintain and distribute "visual aids" came into being in the 1930's, many serving individual academic units within a college or university. The practice of consolidating these centers to serve campus-wide media needs began in earnest during the late 1940's.

The World War II years saw the beginning of a major growth period for new instructional delivery systems. Colleges and universities, in some cases reluctantly, accepted and implemented such resources as instructional television, programmed instruction, language laboratories, self-instructional laboratories, and multi-media equipped classrooms. War-related training programs demonstrated the educational value of audiovisual devices such as film and overhead projectors, as well as audio recording and playback equipment, and these media became common in college classrooms.

Until the early 1950's, audio-visual materials were rarely seen as more than "aids" in the instructional process. However, over a period of roughly a decade and a half, the audio-visual field became strongly influenced by three other bodies of knowledge, leading to dramatic changes in the theoretical framework upon which we based our services. From communications theory, we realized that media do not exist in isolation but are part of a complex process that also involves a sender, a message, and a receiver. As a result, we became much more aware of the instructional context and the need for matching messages with the media forms most capable of delivering them.

In the field of systems engineering, which had guided the development and production of a vast array of industrial output since World War II, we discovered a methodology by which to plan, design, produce, evaluate, and implement instructional materials and techniques. At the same time, the behavioral sciences enlightened us regarding the basic processes of teaching and learning.

The integration of theory from these three bodies of knowledge into the audio-visual field resulted in two somewhat diverse ways of looking at instructional technology. One was based on the traditional orientation toward product. The Commission on Instructional Technology (Tickton, 1971) defined this view as "the media born of the communications revolution which can be used for instructional purposes alongside the teacher, textbook, and blackboard" (p. 21).

The second interpretation of instructional technology emphasized process rather than product. The Commission defined this new perspective in these terms: "It is a systematic way of designing, carrying out, and evaluating the total process of teaching and learning in terms of specific objectives, based on research in human learning and communication, and employing a combination of human and nonhuman resources to bring about more effective instruction" (p. 21). The process interpretation became known as the "systems approach" to instruction.

The historical context here is very important. The systems approach came into existence at a time when the structure of higher education was undergoing substantial change. Following the boom years of the 1950's and 60's, the decade of the 1970's was a period of fiscal austerity and retrenchment, an era that continues today in many parts of the country. Institutional growth leveled off or declined, faculty mobility dwindled, student bodies and curricula experienced significant change, new and highly sophisticated delivery technologies emerged without adequate campus support systems, and faculty morale became a serious issue.

Colleges and universities realized that their instructional programs could be strengthened through a variety of systematic training and support services for their faculties. The result was two related but separate movements on college campuses. One was faculty development, which focused primarily on the development of teaching skills and revitalization of faculty attitudes toward teaching. The other, a direct application of the systems approach, was instructional development, which was concerned more with the learning environment for students and the solution of specific instructional problems.

At the beginning of the 1970's, these services were available at very few institutions. However, a study by Centra (1976) revealed that, by the end of 1975, "instructional improvement" programs, emphasizing either faculty or instructional development services, or in some cases both, had been established at 60 percent of the four-year higher education institutions in the United States. A follow-up survey by Erickson (1985) found that similar programs still existed on nearly half of America's four-year campuses a decade later, although some of these consisted of little more than faculty improvement leave programs, small grant programs, teaching awards, and so forth. This was a totally new form of instructional technology service, one largely concerned with the process of college teaching itself, rather than the purchase, development, and distribution of equipment and learning materials.

What is indeed unfortunate is that at the vast majority of institutions, faculty and instructional development services have been kept separate from the traditional instructional technology

product-oriented services, and in many cases these services even report to different administrators. I believe that this organizational structure has been a chief contributor to the decline of media service agencies all across the country, especially those that have clung to the product orientation with little or no attempt at services related to the process of college teaching.

I'd like to expand upon that idea to continue the introduction to the IITS model, because it's very important to have this background in order to understand the role of instructional development in all this.

There is a common misconception that the systems approach has to involve some sort of media product. Depending upon the context and learning objectives involved, an instructional system might be completely effective with none of our instructional technology "products" whatsoever. This does not mean that the systems approach has not been applied or that the "process" aspect of instructional technology has not been directly involved.

The systems approach is manifested through the basic steps of a model for instructional development: specification of goals and objectives; analysis of the target student group; task analysis, or analysis of the information or skills that need to be taught; development of some means of assessing student achievement; development of instructional strategies, or lesson plans; selection or development of instructional materials; formative evaluation and revision; and summative evaluation.

Think now about the process of college teaching. These are events that take place in one form or another in virtually every

college course in the world. Every college professor has some sort of instructional goals, if not objectives, even if they are determined by the textbook table of contents. Every professor has some idea of what to expect from his or her students. Every professor has some kind of lesson plan, even if it consists of impromptu, chalk-and-talk lectures. Every professor has some means of assessing student performance, because assignment of grades is a "given" in higher education. Courses are frequently changed in some way from one semester to the next in an attempt to make them a little better, as the result of feedback received by the professor. At the postsecondary level, summative evaluation takes the form of instructor evaluation for the purposes of promotion, tenure, and salary increases.

The point is that instructional development takes place in the office of each and every person who teaches a college-level course, with or without our help. The use of media equipment and non-print learning resources could be banned forever from college campuses, but instructional development will continue because it is impossible to teach without it. Many professors teach without media, but they all perform instructional development.

All of us are aware of the irony in this. Very few college professors know how to perform instructional development. At most institutions, college faculty members are hired to teach, but the primary criterion for employment is knowledge and scholarly activity in the discipline, not superior teaching skills. Sagen and his colleagues (1972) once noted that, "No profession appears to prepare its future members as poorly or devotes as little effort to continuing inservice development as higher education."

The faculty development movement of the 1970's occurred because of recognition on many college campuses of the need to deal with this problem. Unfortunately, faculty development programs frequently focus on the development of general teaching skills among the faculty. While these services are very important, only a relatively small percentage of institutions have established active instructional development programs devoted to analysis, diagnosis, and prescription related to specific instructional problems.

Let me be specific about the services that need to be provided, because these concepts are essential to understanding the full impact of the IITS model. Instructional development services may be classified as follows:

Course Level -- At this level, components of the systems approach are applied to solving instructional problems related to the process of college teaching itself. At the Course Level, media may be prescribed as a potential solution to an instructional problem, but the focus of the development effort is on one or more of the course design or delivery stages described above. Examples of Course Level activities include:

* consolidating two remedial math courses into one individualized, modular, competency-based course to increase the efficiency of the program and allow students to skip modules for which proficiency was demonstrated in a diagnostic test;

* helping a kinesiology professor determine why the lowest marks on her course evaluations invariably related to her exams, and developing course activities designed to overcome the problem;

* assisting a new child development professor, who had never

before taught at the postsecondary level, in determining course objectives and writing a syllabus;

* conducting a program evaluation of the entomology department to identify the causes for a sudden enrollment decline in its service courses;

* helping a management information systems professor design a final project for her course; and

* working with faculty members to conceptualize projects and develop proposals for instructional improvement grants.

It is important to realize that Course Level activities do not need to consume enormous amounts of time and resources. The vast majority of potential Course Level projects could be accomplished with no more than a few hours of consultation. The faculty clients may not even be aware that instructional technology has been involved. But, they walk away with problems solved and better feelings about their teaching.

Faculty Level -- This level includes activities related to improving the teaching skills of the faculty. In other words, we are training professors in the systems approach so that they can solve their own instructional problems, or, better yet, prevent problems from occurring in the first place. Faculty and Course Level instructional development often occur simultaneously in the same project. Many postsecondary institutions provide Faculty Level services through offices known as faculty development centers but do not offer Course Level services. Faculty development and instructional development both are much broader concepts than represented by Faculty Level ID.

Typical Faculty Level activities include the following:

* seminars and workshops on topics related to instructional improvement;

* publication of newsletters, occasional papers, and handbooks on effective teaching;

* new faculty orientations;

* teaching assistant training;

* the videotaping of a professor's classroom performance for the purpose of evaluation; and

* individual consultation related to teaching skills.

Course and Faculty Level instructional development activities are, without question, the single most important services that we as instructional technologists can provide for our institutions, because they go right to the heart of the college teaching process itself. Please note that I did not say that that is where we should concentrate our resources, because that is certainly not the case at all. I simply said it is the most important service we can provide, because an active, effective, Course and Faculty Level instructional development capability enables the instructional technology center to become more closely identified with the traditional teaching roles of the college or university. They are services that can benefit every college professor, virtually without exception. And the Course Level, in particular, is a service that only instructional technologists, trained in the systems approach, are best qualified to provide.

Media Development Level -- This level applies instructional development methodology to the creation of learning materials, in all formats, including computer-supported learning. This appears

to be a type of ID frequently practiced in media centers, although many media production units still produce materials without ID input. This level of ID addresses vitally important questions such as the relevant learning objectives; the specific purposes of the media within the instructional context, such as whether the function is providing motivation, presentating content, presentating examples, providing the stimulus for practice activities, and so forth; the plan for integration of the media with other learning activities; and the decision-making regarding the relative appropriateness of one medium versus another. The answers to these questions have important implications for decisions regarding media format, amount of information covered, script treatment, and the use of available production techniques.

Media Utilization Level -- This level consists of assisting faculty members in the effective selection and utilization of educational media equipment and materials. This does not require much explanation, since most of us do it, but typical activities at this level would include showing a professor how to use a videotape recorder or thread a 16mm projector, helping a faculty member in locating a learning resource for a specific purpose, or offering guidance in selecting learning activities prior to and following classroom media use. The Media Utilization Level, while necessary, is the lowest form of instructional development.

The preceding may have been a long introduction, but this kind of foundation may be of considerable value in understanding the IITS model. Let us look at the ways in which instructional

technology services appear in higher education. The service areas I am about to describe were identified in fliers, organizational charts, annual reports, and other sources that were solicited by the AECT Standards Committee from about 70 college and university instructional technology centers in May of last year. It was found that the types of services offered, when grouped into logical functional areas, form a model somewhat different from existing published models for instructional technology services, although none of these services are new, and many of us have been doing at least some of these things for at least 15 years. It must be emphasized that only a handful of these centers provided all these services; most offered several, and some provided only one or two, depending upon their stated missions.

Instructional/Faculty Development -- Instructional and Faculty Development are combined here, because improving a course and training a faculty member may be closely integrated in the same project. While some services are distinctly instructional development and others, such as faculty career counseling, are uniquely faculty development, many activities could realistically be classified as either, and semantics should not stand in the way of an extremely important service. All levels of instructional development may be performed by the ID/FD component, although the Media Development and Utilization levels are most often provided in cooperation with other IITS functional areas.

Learning Resources -- AECT (1977) defined learning resources as "all of the resources (data, people, and things) which may be used by the learner in isolation or in combination, usually in an informal manner, to facilitate learning" (p. 156). While AECT

considered learning resources to include messages, people, materials, devices, techniques, and settings, for the purposes of this model learning resources will be limited to materials commonly maintained and distributed for faculty and student use. The emphasis here is on educational software, such as videotapes and 16mm films. Learning Resources services are often integrated within academic libraries, and the standards for both college and university-level libraries, published by the Association of College and Research Libraries (ACRL) make specific provisions for this type of service. Media Utilization Level instructional development services are often provided by the Learning Resources functional area.

Media Development -- Media Development services design and produce educational materials in the traditional formats, such as video, film, slide-tape, and graphics. Some have capabilities in newer delivery technologies, such as interactive videodisc. Media Development units may also produce materials for non-instructional use, such as for student recruiting, fund-raising, and institutional promotion. Media Development Level instructional development services are often provided as part of the media development process. This functional area may also be responsible for producing courseware for the college or university's distance education programs, in which case Course Level instructional development may also be involved.

Classroom Technologies -- Classroom Technologies services include all activity related to the equipment used for experiencing educational materials and programming in the learning setting. Purchase, installation, maintenance and distribution of educational media equipment, video and computer projection

systems, and campus telecommunications systems, including closed-circuit television, would be included. Media Utilization Level instructional development services may be offered through this functional area as well.

Instructional Telecommunications -- Whereas Classroom Technologies is responsible for all intra-campus telecommunications distribution systems, Instructional Telecommunications is charged with all off-campus electronic distribution of courseware. This includes purchase, installation, operation, and control of off-campus distribution systems, such as broadcast television and Instructional Television Fixed Service (ITFS) facilities, as well as interface with cable systems. Instructional television services are often maintained as separate campus agencies, and many provide broadcast facilities affiliated with the Public Broadcasting System (PBS). Although course development is the responsibility of the Instructional Development and Media Development functional areas, these services may exist within the organizational structure of the Instructional Telecommunications center itself.

Instructional Computing -- Instructional Computing services include the operation and maintenance of computer laboratories, both micro and mini; Media Development Level instructional development and programming support to faculty members involved in the creation or adaptation of software for computer-supported learning; and distribution and maintenance of microcomputers and software on loan to faculty and students. Responsibility for these services is frequently assumed by campus computer centers, many of which are oriented primarily toward research support and

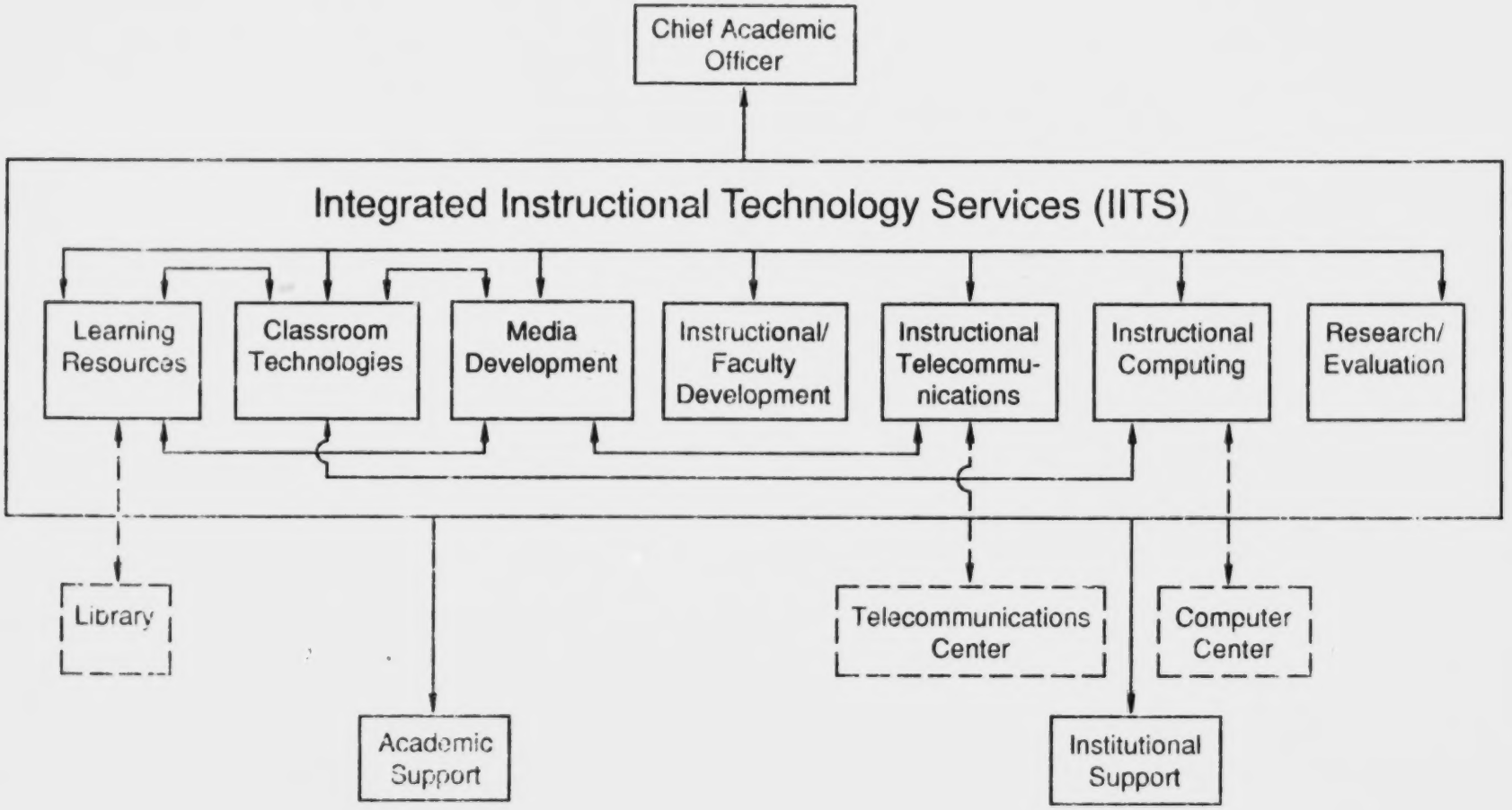
administrative data processing. It is therefore doubly important that the instructional computing component of the center be recognized as an instructional technology functional area in and of itself.

Research and Evaluation -- This is a functional area not always associated with instructional technology programs, but it has a direct relationship to the systems approach. Research and Evaluation services may include instructor and course evaluation, test-scoring services, assistance to professors in writing exams and interpreting exam results, maintainance of a test item bank, development and administration of placement and achievement examinations, assistance to professors in conducting classroom research, grant-writing assistance to professors seeking external funding for instructional projects, and responsibility for institutional research regarding the instructional program.

The IITS Model

Figure 1 illustrates how these seven functional areas can be viewed within the framework of an Integrated Instructional Technology Service concept. Note that the Instructional/Faculty Development box is in the center of the model, symbolizing the centrality of this service. Arrows demonstrate the two-way interaction between Instructional/Faculty Development and each of the other service areas. Functional relationships among the other areas are also designated by arrows.

Dotted lines show relationships of IITS functional areas to other campus service agencies. It may be argued that the library should be included within the IITS model, possibly as a Library/ Learning Resources functional area. This organizational structure is more likely to be feasible at smaller institutions. However,


Chief Academic Officer
Integrated Instructional Technology Services (IITS)
Learning Resources
Classroom Technologies
Media Development
Instructional/ Faculty Development
Instructional Telecommu-nications
Instructional Computing
Research/ Evaluation
Library
Academic Support
Telecommunications Center
Computer Center
Institutional Support

an academic library frequently maintains a position of eminence on campus, along with a traditional identity of its own. Most library directors report directly to their chief academic officers. The idea that the library should become a part of a larger instructional services organization may be difficult to sell. The same holds true for the computer center. The library, computer center, and IITS center should exist side-by-side on the institution's organizational chart, as cooperating agencies, each reporting to the chief academic officer.

As we look at these seven functional areas, the only one that might be considered optional is Instructional Telecommunications. Many colleges and universities have no interest in distributing courses off campus, and so this type of service is not necessary. All of the other functional areas are required in at least some form on every college campus.

Although these services are already present in one form or another on most college and university campuses, what seems to be lacking is recognition of their common denominator in that they are all instructional technology services. Because these services all have a common mission, that being enhancement of the environment for teaching and learning at our institutions, they need to function together as an instructional technology team. The problem is that we tend to operate as individual players, without a sense of team mission and team spirit, and without a commitment to function together as a team to accomplish team goals. In the real world, players inclined to function as individuals instead of team members often find themselves on the waiver list or being released by the orgnization's management. In

way, I think that is what has been happening to us, although I do not think that many of us do it consciously.

An important question is whether all these services should exist under the same administrative umbrella, perhaps as part of a Center for Instructional Services. Interaction and coordination among these functional areas would likely be enhanced if they were all part of the same agency. However, they could exist as several centers without formal administrative ties as long as there is routine communication and sharing of services and activities among them, particularly between the Instructional/Faculty Development functional area and all others. This means an active networking system and an instinctive readiness to call on specialists in other functional areas for input in matters of mutual concern. This is the very foundation of an Integrated Instructional Technology Service.

It may also be asked whether an IITS structure may be feasible at smaller institutions, especially private colleges and universities. The mere fact that a professor works at a liberal arts college with an enrollment of 700 and a faculty of 65 does not mean that that individual should be deprived of any of these services. The need is every bit as great, and the services still require coordination. The variety of programming may not be as wide at smaller colleges, and one person may have to provide services in more than one functional area, but a professor who desires instructional or faculty development help or any of the other IITS services ought to be able to get it.

What Has to Happen?

What has to happen before the promise of instructional technology can be fulfilled in higher education, througn Integrated Instructional Technology Services? Here are eight suggestions.

1. Make a personal commitment to change. On many campuses, instructional technology programs based primarily on product-oriented services will be increasingly difficult to defend to administrators in the years to come. Some are already gone. An IITS center, integrating product and process approaches in an active, highly visible instructional services program may be easier to justify. However, a shift to the IITS concept will in many cases require significant change in the personnel who currently operate traditional media centers.

For many individuals, such a shift would mean the need for expanding one's own professional skills, particularly in areas such as instructional development methodology, learning theory, fundamentals of college teaching, and faculty development methods. We must be willing to undertake the professional development experiences necessary to enable us to provide these services effectively. Moreover, it is up to organizations like AECT, and particularly DEMM and the Division of Instructional Development (DID), to provide that programming.

Just as important is a shift in personal philosophy. For many persons who have lived their professional lives in a media hardware/software environment, it may be difficult to accept the notion that instructional and faculty development ought to be an essential part of their services. The idea that their domain as

instructional technologists includes the solution of instructional problems not involving media may even be quite threatening to them. These fears must be overcome.

2. Think small. Ever since the early days of the systems approach, we have been conditioned to think in terms of a large-scale, sophisticated instructional system. The systems approach is frequently associated in the literature with the use of complex electronic delivery systems, the development or reconstruction of entire courses, and the creation of self-instructional materials. Doctors do not have to give their patients complete physicals in order to solve most of their problems. Likewise, we do not have to apply the whole ID model to solve most of the instructional problems that faculty members have.

The systems approach can be quite effective for small-scale projects as well. Services can be as simple as helping a professor trouble-shoot a course, or write an exam, or develop a single learning activity. Very few college professors have either the time or the incentive to embark on instructional improvement endeavors of any significant scope, but much can be accomplished in a couple of short meetings. Gear your Course Level instructional development services around this type of activity, and adjust for the larger scale project if and when it arrives.

3. Go slowly at first, then build. Few, if any, of us have the kind of budgets that permit the employment of new personnel and establishment of instructional development divisions within our existing centers. Even if possible, rapid growth would likely be resented by faculty members concerned about the size of their pay checks. The only exception might be an infusion of funding

from off-campus sources.

It is best to start with a few small-scale programs that can be managed by existing personnel within the current budget. There is much that can be done with little or no expenditure of funds, including individual consultation regarding instructional problems, start-up of a faculty peer support group or teaching skills seminar series, publication of a newsletter or fliers devoted to teaching matters (including content provided by faculty with expertise in these areas), and implementation of a new faculty or teaching assistant training program. Funding for special activities can sometimes be obtained from the chief academic officer. As support builds for these programs, and as demand for them can be established, it is easier to justify budget requests for expanded services, including additional personnel.

4. Challenge the institution's commitment to teaching. The problem may not be as acute at smaller colleges, but at the university level teaching often ranks a poor third behind research and service among the institution's priorities. Reward systems frequently reflect this philosophy. Someone needs to serve as an advocate for excellence in teaching, and we are the ones to do it! There is no defensible reason why an institution that spends tens or even hundreds of millions of dollars annually to support research cannot spend a small fraction of that amount to support teaching, and we as instructional technologists need to get that message out.

5. Nurture faculty support. The literature on instructional improvement programs indicates that such centers have a greater chance of being successful if faculty members have some measure of

control over the center's programming. The center will establish and maintain its credibility with the faculty if it is responsive to specific faculty needs. It would help to have an advisory board, consisting of faculty representatives, to advise and help direct the programming of the center.

Faculty support is likely to be more forthcoming if instructional technology center administrators can be clearly identified as faculty members themselves. Faculty rank alone is not enough. In order to be recognized by professors as colleagues and peers, we need to do what they have to do. We should teach, conduct research, publish, serve in the institutional governance structure, and engage in off-campus service activities as often as possible, given the time and energy commitments of our positions.

6. Solicit financial support from off-campus sources. Regardless of whether additional institutional support can be obtained, instructional technology centers should seek funding from off-campus sources. (Landing grants and contracts is another important function of faculty members.) Although the days of large-scale public and private funding for instructional support agencies are long since over, funds are still available from a number of sources, albeit on a highly competitive basis. The development office might also be able to raise funds for specific uses from contributors to the institution.

7. The center name should reflect the totality of services. Gaff (1975) once observed that faculty members have difficulty turning to a campus media center for instructional development help. According to Gaff, "disdain for technological 'aids'" (p. 73) leads many professors to "dismiss any idea that emanates from

media centers" (p. 73). Even among faculty members with favorable attitudes toward media, the association of instructional and faculty development with media services is not always made.

The solution is to select a name for the center that reflects the Integrated Instructional Technology Services concept. The term "audio-visual" was obsolete 20 years ago. For centers that offer faculty and instructional development as well as media services, the terms "media," "instructional materials," and "learning resources" are also too restrictive. An apparently logical choice, "instructional technology center," may also be inappropriate because faculty members, like many media professionals, often equate instructional technology with media equipment and software. The best title is one that reflects an emphasis on instruction itself, such as "center for instructional services" or "teaching and learning center."

8. We need to disassociate administration of instructional technology services from academic libraries and computer centers. According to the DEMM survey in 1982-83, about 40 percent of the centralized media centers in higher education were subordinate to library directors. Such an organizational relationship is completely defensible if the entirety of the service is devoted to learning resources in the narrower sense described above, along with playback equipment for use within the confines of the library. However, the IITS model clearly illustrates that learning resources represents just one of seven functional areas of instructional technology services in colleges and universities.

The Association of College and Research Libraries (ACRL) has developed separate sets of standards for liberal arts/comprehan-

sive institutions and for doctorate-granting universities. Neither set of standards makes any reference whatsoever to instructional or faculty development services. Neither mentions instructional telecommunications or computer-based learning or services that provide media equipment to classrooms. Neither specifies that libraries should provide research and evaluation services for the purposes of classroom support and instructional improvement.

Do any college or university libraries maintain offices for the specific function of writing books? Of course not. Yet, we do not think it is unnatural for academic libraries to produce media in other formats. Given the choice between cutting back reference services or acquisitions, which are covered by the ACRL standards, or media production or classroom equipment services, which are not, any decision by a library director to trim the latter would seem to be quite justifiable. Other than learning resources, instructional technology services simply are not part of an academic library's mission.

Instructional technology services subordinate to library administrators have functioned quite successfully on some campuses. The DEMM survey identified a fair number of these. However, this prosperity is dependent upon the commitment of the library director and chief academic officer to making it work. We have seen case after case in which one or the other of these individuals departed and was replaced by someone with a less benevolent attitute, and the results were disasterous.

The same concerns may be raised about the growing number of instructional technology centers being grouped with campus

computer centers under a common administrator. The problem described above is that computer centers are often heavily oriented toward administrative and research support functions, and instructional computing may not be an emphasized service area. Moreover, the common administrator is almost invariably a computer specialist who may have little expertise or interest in instructional technology.

A recent ad in the Chronicle of Higher Education illustrated the lower priority often placed on instructional technology qualifications in this situation. An institution in the California State University system advertised for a "Director of Computing, Media, and Telecommunications." The totality of the qualifications listed were directed toward expertise in computer operations and voice and data communications. There was not one word related to computer-supported learning or to educational media or instructional telecommunications. Yet, the faculty at this university will apparently be dependent upon this person for administration of their instructional technology services.

There is no question that the instructional technology center needs to maintain close working relationships with both the library and the computer center. However, it should never be placed in a position subordinate to one of the other centers. In the IITS model, a direct reporting relationship to the chief academic officer is specified, and only on rare occasions is any other chain of command defensible for an instructional technology center serving a campuswide clientele.

It would be inaccurate to portray budget cutbacks, reorganizations, and administrative scrutiny as being exclusive to instructional technology centers. Certainly, other service agencies are facing the same kind of pressures, as are many academic departments. Nevertheless, we have to be concerned about the prospects for our centers in the 1990's. We simply cannot continue with "business as usual" media services and expect to be there in good shape at the beginning of the 21st Century.

Let me play the devil's advocate for a moment. Any secretary or paraprofessional can dispense media equipment and software. Closed circuit television services really are unnecessary, as are ITFS systems and instructional programming via local cable systems, witness the vast majority of colleges and universities that are getting along quite well without these delivery technologies. The same can be said for centralized media centers. Few people would suggest that the academic reputation of the University of Texas at Austin, or the University of Nebraska, or Kansas State, or Texas A&M, just to name four in the Great Plains area, has suffered serious damage because of the absence on these campuses of high-powered, centralized instructional technology services. For that matter, formal instructional/faculty development programs may also be difficult to justify. We cannot make the assumption, for example, that instruction at the 50 percent or so of America's colleges and universities that have ID/FD services is significantly better than at the 50 percent that do not.

It would not be hard for administrators or faculty senates to rationalize the complete abandonment of formal instructional

technology services on these grounds. One of our many handicaps is the almost total lack of useful, current information regarding the extent and quality of services provided by our centers on a nationwide basis. However, the information we collected last spring indicates that none of the seven IITS functional areas was universally available, on a centralized basis, even among just 70 colleges and universities. It is quite conceivable that an administrator could conclude, "Well, if good old East Coast State U. can boast the sterling national reputation that it has, without draining its resources supporting a media center, then wouldn't we be better off allocating our $300,000 annual media budget toward faculty salaries, scholarships, and new equipment for the chemistry building?"

We know, in our own hearts, that we can make a difference, and, fortunately, the majority of administrators seem to share that view, at least for the present. For the most part, it is only when the difference comes into question that conditions become critical. It would seem to be imperative, therefore, to make sure that the difference is clearly visible to all of the campus decision-makers.

Demonstrating that difference from the periphery of the institution's instructional program, as an auxiliary service, may be a formidable challenge. We need to burrow ourselves so deeply into the academic mainstream that curtailment of our services would be absolutely unthinkable. We can move toward that goal through direct involvement in the college teaching process itself, by teaching professors how to teach, by helping them organize or reorganize their courses or parts of courses or even entire

curricula, by assisting them in solving the pesky little problems that they face in the classroom every day, by being there when we are needed.

I am not suggesting that we ought to shift the emphasis of our services from the usual media functions to instructional and faculty development. "Instructional improvement" centers have suffered high casualty rates of their own over the years. A study by Gustafson and Bratton (1984) found that of 72 such centers identified by Gaff in 1975, 20 had been disestablished by 1983. A very important symbiotic relationship exists between the product and process aspects of instructional technology. We need traditional media services and faculty and instructional development services, and each provides vital life-support functions to the other. The synergism that results when these two service components are vigorously applied to college teaching can bring strength and vitality to the instructional program at any college or university, regardless of size. The IITS model is proposed as a means by which that goal can be accomplished.

References

Albright, M.J. (1984). The status of media centers in higher education. Media Management Journal, 3(3), 4-18. (Also ERIC Document Reproduction Service No. ED 242 306)

Association for Educational Communications and Technology. (1977). The definition of educational technology. Washington, DC: Author.

Centra, J. (1976). Faculty development practices in the United States. Princeton, NJ: Educational Testing Service.

Erickson, G.R. (1985). An overview of the 1985 survey of faculty development practices. POD Network, December 2, 1985, pp. 1-2.

Gaff, J.G. (1975). Toward faculty renewal. San Francisco: Jossey-Bass Inc., Publishers.

Gustafson, K., & Bratton, B. (1984). Instructional improvement centers in higher education: A status report. Journal of Instructional Development, 7(2), 2-7.

Sagen, H.B. (1972). Improving faculty inservice programs: Implications of the NCA seminars for inexperienced college teachers. North Central Association Quarterly, 46, 331-334.

Tickton, S.G. (Ed.). (1971). To improve learning: An evaluation of instructional technology, Vol. II. New York: R.R. Bowker Company.